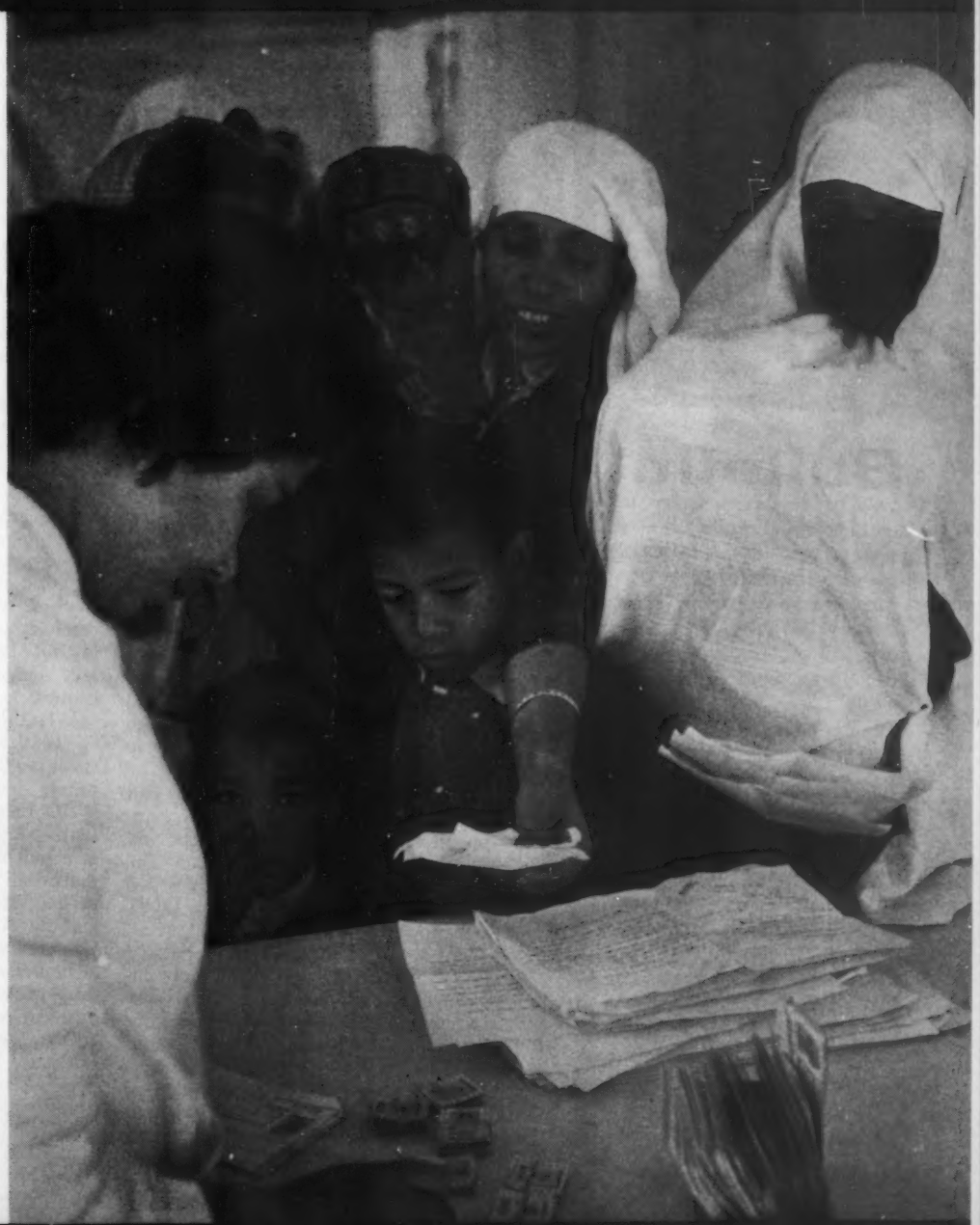
Bulletin

International Work in Tuberculosis Control



In Tunisia, as in many countries, tuberculosis is an overwhelming health problem. The World Health Organization and the United Nations Children's Fund are participating in the Tunisian Government's two-year tuberculosis control program. The first step is establishment of a permanent record card, with photographs attached.

NATIONAL
TUBERCULOSIS
ASSOCIATION

Bulletin

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A Backward and Forward Look at the IUAT

FORTY YEARS AGO NEXT MONTH, the International Union Against Tuberculosis was organized at a meeting in Paris, attended by representatives of 31 countries, including delegates from our National Tuberculosis Association.

From 1920 until the outbreak of World War II, the IUAT was a relatively small organization, devoting its biennial conference and its monthly bulletin largely to clinical and experimental laboratory discussions. The NTA made contributions of increasing importance to these as the work in our country expanded.

During the long interregnum from 1939 to 1945, when the work of the IUAT was temporarily suspended, the NTA found it necessary to give help to other countries. Much thought was given to the place of the IUAT in the world campaign against tuberculosis.

With the establishment of the World Health Organization in 1946 as an organ of the United Nations, the NTA decided that a complete reorganization and reorientation was needed. In 1948 at a Council meeting in Paris, Dr. James E. Perkins, Managing Director, on behalf of the NTA delegation, introduced a resolution, adopted unanimously, recognizing that the IUAT should take a more active part in a world campaign against tuberculosis, should increase the number of national tuberculosis associations throughout the world, and should cooperate effectively with the World Health Organization. The resolution further stated that to this end it must increase its financial resources, appoint a full-time executive director and revise the constitution of the Union. The various delegations of the NTA have led in pushing needed revisions to the IUAT constitution.

An executive director was appointed in 1952. He has brought about many improvements and changes but has now reached retirement age. After working for years in cramped space, the Secretariat now has adequate working quarters at 15 Rue Pomereu, Paris. The number of constituent members has increased until the Union has now become a truly worldwide federation of 65 members. Three regional committees represent Asia, the Near and Middle East, and Latin America. There are eight technical committees; a committee of executive directors and secretaries general which holds an annual one-day conference for a discussion of programs and administration; a committee on health education; administrative committees on program and on budget and finance; and, when needed, various ad hoc committees.

The Union, however, has disappointed the NTA by lagging in its efforts to increase the staff and budget and provide greater service for its growing list of members, especially those with very large tuberculosis problems.

Last year, the Board of Directors of the NTA provided a new incentive for stepping up the world-wide campaign against tuberculosis by urging the IUAT to submit a resolution to WHO asking that organization to give top priority to "the elimination of tuberculosis as a public health problem throughout the world." The IUAT Council, when it met in Istanbul last September, adopted the resolution unanimously. In January, the secretary general of the IUAT, Prof. Etienne Bernard, and Dr. Perkins appeared befor the executive board of WHO in Geneva, where the resolution was well received, and the World Health Assembly in May directed that the program give increased emphasis to tuberculosis control.

WHO had already acted to give priority to the eradication of malaria and smallpox throughout the world. It is our belief, now supported by IUAT and WHO that with the specific tools currently available, it is time to set the goal of elimination of tuberculosis throughout the world. Further discussion is expected at the Paris meeting, September, 1960, and the XVI International Tuberculosis Conference to be held in Toronto in 1961.

Implementation of efforts to reach this goal—manpower, enlarged program, more financial resources—will take time, and calls for careful planning. This great project must be pushed forward on every possible occasion. We in the United States who have proposed this goal must continue in the forefront of efforts to achieve it.

FREDERICK D. HOPKINS
NTA Consultant on International Affairs

International Work in Tuberculosis Control

Powerful anti-tuberculosis drugs have made hope of recovery possible in many countries. In Madras, India, new methods of controlling TB are being evolved by a World Health Organization team. Visalam, wife of a laundry worker, swallows an isoniazid tablet.

With the celebration of the fortieth anniversary of the International Union Against Tuberculosis this year and the holding of its annual Meeting in Paris this month (September 5-10), a brief sketch of the present picture and a short history of past activities is timely. Frederick D. Hopkins, NTA consultant on international affairs, brings us up to date on the work of the present international tuberculosis organization, the IUAT, in the editorial. He has recently prepared a monograph, "International Congresses and Conferences" which traces the history from 1899 to 1959.

Many years before the IUAT was formed in 1920, important work was being done in the international field, work that was extremely important to research and control of the disease, work that has had a direct affect on our own national organization.

* * *

WHEN THE FIRST INTERNATIONAL MEETING on tuberculosis was held in 1899, shafts of light were just beginning to fall on the mystery of this debilitating and hitherto unconquerable disease. In almost every country, consumptives, as they were then called, were a common sight—flush cheeked, hacking, spitting. Millions of people lacked the necessary strength to earn an adequate living for themselves and their families. Few areas of the world did not know the tragedy of tuberculosis.

Today, more than sixty years later, the problem is still a vital one in most countries. As we know, great strides in TB control have been made by some of the more advanced nations, and with the development of new drugs in the past ten years, the United States and some other countries are looking toward its eradication in the foreseeable future. However, in many underdeveloped areas, tuberculosis is still an enormous, overwhelming problem, the most important one in communicable disease control.

First International Meetings

The first meetings for the purpose of discussing the international aspects of tuberculosis were held in Paris, between 1888 and 1898. Fifteen countries were represented at the first meeting. At the 1898 meeting, a Viennese medical professor, Dr. Leopold von Schrötter, suggested organization of a committee to form an international organization.

In the meantime, national associations were beginning to be organized. The earliest one was founded in 1890 by Prof. von Schrötter in Vienna, under the name of "A Society for the Establishment of Sanitoriums for the Consumptive Poor." A French League Against Tuberculosis was in existence in 1891. In 1898, the National Association for the Prevention of Consumption was organized in London. Other European national associations followed.

It was in 1899 that the first truly International Tuberculosis Congress, with official representatives from governments and voluntary associations, was held. Unlike its predecessors, which were of a medical nature, it gave special attention to preventive measures.

The Third International Congress, held in London in 1902, was notable for two reasons. First of all, Robert Koch, discoverer of the tubercle bacillus, was present, and controversy arose regarding his statements about the transmission of bovine tuberculosis to man and of human tuberculosis to cattle. Second, a resolution urged organization of "a permanent international committee." On the basis of this resolution, the Central International Bureau for the Prevention of Tuberculosis was organized in Berlin shortly thereafter. The name was changed to the International Anti-Tuberculosis Association in 1905.

International Anti-TB Association

The Association published a monthly bulletin, held conferences every year for its members, and about every three years a congress for all members

LEADERS OF EARLY INTERNATIONAL TUBERCULOSIS MEETINGS. Left to right: Dr. Robert Koch, who discovered the tubercle bacillus, attended several of the early congresses and conferences. Leon Bourgeois played a major role in bringing the IUAT into existence. A former French cabinet member, he was one of the founders of the League of Nations. Dr. Lawrence F. Flick, organizer of the first voluntary tuberculosis association in this country, was instrumental in bringing the VI International Congress to the United States. Dr. Livingston Farrand, first executive of the NTA, was a strong supporter of international tuberculosis work throughout his career.

together with delegates appointed by governments and national associations.

In 1902, what was called "Die Erste (the first) International Tuberkulose Konferenz," was held in Berlin, although chronologically it was the fourth congress. Dr. Gilbert Sersiron, secretary-general of the French national association, proposed that the double-barred red cross be adopted as a badge of the conference. It was here that familiar symbol of the voluntary movement against tuberculosis had its beginnings.

Spurs Founding of NTA

The need for a national association to represent the U.S. brought the organization of an American NTA to the forefront. In 1904, our national association was formed, and in January, 1905, Dr. Livingston Farrand, as executive secretary, started the tremendous task of developing an organization and at the same time preparing for the Sixth International Congress, to be held in Washington, D.C., in 1908. Theodore Roosevelt accepted the presidency of this congress, and he addressed the closing session. Only one other time has an international tuberculosis conference been held in the North American continent. (This was in 1926, when the fifth IUAT conference was held in the same city.)

By 1912, time was running out on The International Anti-Tuberculosis Association. Its activities were disrupted at the beginning of World War I.

IUAT is Established

After an interruption of more than six years, an international campaign against TB was reestablished with the formation of the International Union Against Tuberculosis in 1920. As Mr. Hopkins points out in his editorial on page 2, the IUAT was a relatively small organization until after World War II. Conferences have been held every two years. Since 1946, when the World Health Organization was established, they have become increasingly important.

IUAT Representation

A word about IUAT representation at the UN. In the charter of the United Nations, provision is made for the Economic and Social Council to make suitable arrangements for consultation with non-governmental organizations "which are concerned with matters within its competence." The World Health Organization repeats this more specifically in its charter. Thus, IUAT has official relations with WHO and consultative status with ECOSOC and all UN specialized agencies. NTA supplies this representation, Dr. James E. Perkins, Mr. James G. Stone and Mrs. Antoinette L. Dunn being presently accredited by IUAT and the UN The United Nations Childrens Fund (UNICEF), which has its headquarters at the UN, has a supporting committee comprised of 59 non-governmental agencies interested in its programs. Mrs. Dunn is at present vice-chairman of that committee.

XVI Conference

When the XVI International Tuberculosis Conference takes place in Toronto, September 11-17, 1961, it is hoped that many United States tuberculosis workers will take advantage of the proximity of the country so honored in that year. The program is being planned with an eye toward an extremely broad scope of topics in the field of public health, in addition to scientific subjects. Even though the last large conference was held in Istanbul, Turkey, NTA had more than fifty participants. In Toronto, perhaps we can hope for six times that number. The program will be announced in the *Bulletin* at the beginning of the year.

It is hoped that many of those who have read this brief outline of the background of our international work in the tuberculosis field will have an opportunity to see for themselves the scope of the anti-tuberculous effort throughout the world.

James E. Perkins, M.D., NTA managing director, addressing the XIII International Tuberculosis Conference in Madrid in 1954. Woman at left is Mrs. Sven Ljungdahl, daughter of Einar Holboell, father of Christmas Seal. Presiding is Marquesa De Villaverde, daughter of Generalissimo Franco. To her left is Prof. A. Crespo Alvarez, of Spain then president of IUAT. To her right is Prof. Etienne Bernard, secretary general, IUAT.

This nation of four million inhabitants, with 75 per cent of the land area devoted to farming, is concentrating TB case-finding programs on high-risk groups. Illustrated is a section of Jutland, the western peninsula that adjoins Germany.

The TB Risk in Different Groups–

Danish Nationwide Study Reveals an Important Key to Total Elimination of TB

F. M. Feldmann, M.D.

Director of Research, National Tuberculosis Association

IF TUBERCULOSIS IS TO BE WIPED OUT in countries where conditions are most favorable—where the incidence is low and the work well organized—we must not only examine our own programs critically but also scrutinize the work being done in other countries.

In Denmark, a mass TB screening of the whole country was carried out, followed by four years of careful observation. A report of this work, titled "Epidemiological Basis of Tuberculosis Eradication in an Advanced Country," appeared in the World Health Organization *Bulletin*, Vol. 21, No. 1, 1959. The study is of immediate practical importance to everyone involved in tuberculosis control.

We need to know in much greater detail than we do now the risk of contracting TB in different population groups. When this is known, then all resources for screening for TB, all resources for follow-up, can be concentrated on those who are most likely to develop the disease. Thus, waste motion can be avoided and rapid progress made.

The Danish study demonstrates that even such simple examinations as tuberculin testing and chest radiography may result in marking off large low-risk groups and allow the enormous number of routine examinations of the population to be reduced. In the same manner, it may be possible to define high-risk groups on which frequent observation and preventive efforts must be concentrated.

Carried out under an administrative organization called the Danish Tuberculosis Index, the study was done as a cooperative undertaking of the National Health Service of Denmark and the WHO Tuberculosis Research Office.

Country-wide Study Begun

During the period from February, 1950, to December, 1952, tuberculin testing, X-raying, and BCG vaccinating teams covered the entire country with the exception of

Copenhagen, the island of Bornholm and a few small communities where campaigns had been previously carried out. The only population group not included was school children age 7-14 years who were being tuberculin tested and vaccinated in the schools. Over one million persons were examined. A sputum specimen or a gastric lavage was obtained whenever there were suspicious findings on the X-ray.

Among the 795,000 adults examined in the mass campaign, 503 previously unknown cases of active pulmonary tuberculosis were found—a rate of one case per 1,500 examined. Figured according to age and sex, cases of TB found per 100,000 population the rate ranged from 36 in men age 15-24 to 94 in women age 25-34.

The report provides much more detail on the cases found during the initial campaign than during the follow-up. However, the findings in the four-year period of follow-up are striking, indeed, and furnish valuable documentation on risk rates not previously available for any population group in the world.

Four Year Follow-up

Among the 744,261 individuals judged healthy, so far as tuberculosis is concerned, at the start of the follow-up period, 878 new cases of tuberculosis developed, 742 of which were pulmonary. This is an average annual incidence of 25 per 100,000. Although the rates were somewhat higher for women and for the age group 15-34, the differences are too small to be of much use in defining risk groups. It is only when tuberculin test and X-ray results are considered that big differences in risk rates become evident.

The Unvaccinated Group

In a group of 320,000 unvaccinated tuberculin reactors, the annual case rates per 100,000 in the age group 15-24, according to size of tuberculin reaction were as follows: 6-11 millimeters, 24.5; 12-17 mm., 56.4; 18-23 mm., 87.8; and 24 mm., 72.6. In older persons, the differences by size of reaction were less striking.

X-ray findings at the start of the follow-up period were classified as normal (90 per cent), healed lesions (7 per cent), and suspicious (3 per cent). The corresponding new annual case rates were 27, 51, and 370, respectively, for all ages. However, the rate was 1,022 for those in the age group 15-24 who had suspicious shadows. The highest case rate—roughly 2,000 per 100,000 persons per year—was in a subgroup of 1,200 persons whose X-rays showed definite lesions, probably of tuberculosis origin.

The Vaccinated Group

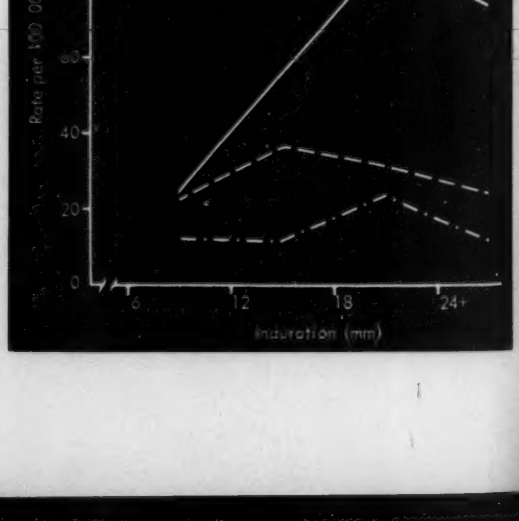
Although the case rates in the vaccinated groups were low, 23 per cent of the new cases arose among them. Since there was no randomly selected unvaccinated control groups, the effect of vaccination could not be measured.

Conclusions

The report concludes: "Certainly the enormous numbers of routine repetitive X-ray examinations of adults can be drastically reduced and the case-finding nevertheless intensified. Persons in the older age-groups with normal findings on a single photofluorogram, even though they have positive tuberculin reactions, need not be called back for examination year after year. They can be left in peace. But persons of any age with suspicious X-ray lesions and young people with large tuberculin reactions should be followed systematically. These high-risk groups comprise such a small percentage of the total population that continuous and close supervision is both practicable and profitable."

New cases of pulmonary tuberculosis that appeared among unvaccinated tuberculin-positive adults in the 3½ years following the Danish nationwide screening campaign. Graph is based upon types of suspicious shadows seen on the X-rays.

Type of suspicious shadow	Population	New cases	Annual rate per 100 000
Definite lung lesion, probably tuberculous	1 237	88	2 033
Definite lung lesion, probably non-tuberculous	973	14	412
Questionable shadow in lung field	384	7	530
Questionable or definite pathology in the pleura or hilus	381	2	150
Total	2 975	111	1 070



Incidence of new cases of pulmonary tuberculosis in unvaccinated tuberculin-positive adults, according to size of reaction to 10 TU test, by age.

In-Service Training Programs for Association Staff Members

Better understanding of the organization itself and the roles of individual staff members was brought about by an in-service training program conducted by the Tuberculosis Institute of Chicago and Cook County. Instructor at left is Dr. Julius B. Novak, medical director. At head table is John E. Egdorf, executive director (right), and Dr. Milan V. Novak, president.

John E. Egdorf

EVERY ADMINISTRATOR is aware of the difficulty in keeping abreast of new information and the changes that occur so rapidly in present-day tuberculosis control and of seeing that this information reaches the staff with uniform understanding. The whole matter of expediting pertinent information up and down the channels of command in organizations large or small, be they non-profit, industrial, commercial or whatnot, has long been recognized as being the key to success. For a sizable public health agency in a metropolitan area, this problem is acute. For one that deals with tuberculosis, it is particularly so because of the many ramifications of the disease itself, the multitude of helping hands required for its control, the departmentalization of professional staff, and many other factors.

Over the years, the Tuberculosis Institute of Chicago and Cook County has routinely held professional staff meetings in an organized manner, twice monthly. In addition, both department supervisors and all staff members really work at the job of informing each other about program activities. But in spite of all these measures, it is both astounding and disturbing to find that communications break down many times – the right hand not knowing what the left is doing.

In recent years, our information problem at the Tuberculosis Institute has been sharpened because we have been enlarging our industrial education program. In an effort to come to a better understanding of the problems plant management faces in setting up employee education programs, we decided to cut out a program of our own for size. We would attempt to bring our staff members up to date on the status of tuberculosis control in our area and also on our own place in the over-all picture.

A staff committee was appointed to work up an in-service training program for our employees. Periodic discussions were held with the executive office. A questionnaire covering wide subject matter was circulated to all employees to draw out the most significant gaps in the information we felt they should have.

Using the questionnaires and committee discussion as a guide, we defined the objectives and outlined the subject matter. The over-all objective was to advance staff knowledge so that optimum service to the public could be given by all staff members. A further objective of the program was to orient the individual staff member and help him understand his specific role in the Institute. We decided to work up the training course around the following subjects:

1. Up-to-date information about tuberculosis and the status of its conquest.
2. The role of the major agencies concerned with tuberculosis control in our area.
3. The broad program of Institute activities in tuberculosis control.
4. Highlights of the Institute's history, its organizational and administrative structure, its personnel policies and practices, its relationship with the nationwide voluntary tuberculosis movement, and finally, its present and future course.
5. The advancement of general public health in our area and the Institute's role therein.

John E. Egdorf is executive director of the Tuberculosis Institute of Chicago and Cook County. He is president of the Mississippi Valley Conference on Tuberculosis and past president of the Illinois Public Health Assn. He was formerly chief of physical restoration, State of Illinois Div. of Vocational Rehabilitation; executive secretary of the Will County TB Assn.; and health education director of the Illinois TB Assn. Active in the NCTW, he was its representative at the Arden House Conference.

The In-Service Training Committee was faced with a number of basic problems. One of these was to determine program content which would be suitable for those who had a wide background of knowledge and experience. Since we had decided that the program was to be designed for *all* employees, we felt that a minimum basic core of knowledge would be presented, although we knew that this might be "old hat" to some of the staff.

About eighty employees were eligible for the course, but the Institute's busy program schedule would not allow release of all employees at the same time. We also felt that a large group would be less likely to become actively involved in the discussions. Therefore, the staff was divided into two equal groups which met for two hours on alternate Wednesdays over a period of eighteen weeks, beginning in January, 1960. Some of the subjects were so broad that they could not be handled in one training session, so that some multiple sessions were necessary. We decided not to separate the professional from the non-professional employees in the training program, but rather to mix the groups for the values that could be derived from the exchange of information.

Usually the first hour of each session was reserved for presenting basic data either by outside resource people or by Institute staff members. A "buzz" session in small groups followed, and then a general question and answer period with the resource people. The staff were grouped six to a table, which included both professionals and non-professionals.

Films, speakers and role-playing, with some participants recruited from the staff, helped to vary the presentations and maintain interest. As a result, the staff raised many questions, and at times it was extremely difficult to close the sessions at the appointed hour because of the high interest.

Tangible evidence of the success of a program such as this is limited. At the close of each session, an evaluation sheet designed to measure both the effectiveness of the presentations and the value to the individual (submitted unsigned) was given to each employee. In general, the ratings for most sessions showed enthusiastic reception. Even the "old timers" who had predicted that nothing new could possibly be unearthed and that the whole thing would probably prove to be a waste of time were surprised at the results and became enthusiastic participants in the discussions. The staff, for the most part, indicated that the information enabled them to better understand the complexity of the Institute's functions and total program. The role and significance of the individual staff member seemed to become more apparent and meaningful to each person, and an appreciation was developed for the contributions of others. More important was a decided increase of empathy for the tuberculosis patient and his problems.

In addition, it is felt that as a result of this program, the staff leaders now have a better appreciation of the problems that confront industrial executives in conducting educational programs for employees.

The course will be repeated one, two or three years from now, although we have not decided when it should be done. We are firmly convinced that the results have more than justified the investment of time and effort required, and we urge other tuberculosis associations with sizable staffs to try this interesting experiment.

A limited number of the training course outlines are available upon request from the Tuberculosis Institute. We feel, however, that each agency will need to develop its own training program to meet its specific requirements. Although the basic objectives can be pretty much the same, the problems, resources and way of doing things certainly will have wide variance.

Remember NTA's 1959 Christmas Seal flashing display? It won a competition recently. Clarence Kehoe (second from right) and David Kuskin (right) accept award for NTA; Bates Fertig (left) for the Diamond National Corp., the printer. Ed Williams, Lithographers and Printers Assn., presents award.

A state association shows that

KEY COMMUNITY ORGANIZATIONS CAN BE DRAFTED

to close the gaps in TB control

Jean MacCorison and Marjorie Hart

A STRIKING EXAMPLE of what can be done in a community to bring key organizations together to close the gaps in the tuberculosis control program and work towards the elimination of TB was an institute held by the Rhode Island Tuberculosis and Health Association this past April.

A total of 47 local, state and national agencies participated in this institute, showing that active cooperation can be enlisted from other agencies—that those whose help we need can be drafted in the cause of eliminating tuberculosis.

The background study

To go back a moment, the Rhode Island association's Non-Hospitalized Patient Study done three years ago (*NTA Bulletin*, July 1959) showed that approximately 60 per cent of the state's active tuberculosis patients were not hospitalized and raised questions about the care they were receiving. It further showed that the gaps in the area's control program closely paralleled those revealed in country-wide Public Health Service studies on the same subject.

Clarissa E. Boyd, NTA, and Dr. Edward T. Blomquist, U.S. Public Health Service, gave the background of the Arden House Conference, showing how closely allied its recommendations are to the Rhode Island association's study done three years ago.

Copies of the non-hospitalized patient study published by our Rhode Island association were sent to all key agencies and individuals. Publicity at the time aroused interest, and public health nurses were among the first to study how they could meet the new challenge. But progress was slow, and intergroup coordination was lacking.

Institute held promise

Review of the study's 18 recommendations showed that almost every one of them required cooperation of agencies or individuals whose work was not limited to tuberculosis control. It brought into focus the need for statewide discussion and action. An institute seemed to promise both.

The decision to hold the institute was made a year before the date was set. Rather than ask those concerned to attend two major spring meetings, it was agreed to hold the association's annual meeting as part of the institute.

We knew from experience that merely to talk "at" people would do little toward making progress. Instead, we decided that we should bring together those already acquainted with the problems.

Groundwork

Groundwork was laid by our association and the State Health Department's Division of Tuberculosis Control, the official agency most directly involved. The manifest interest of nursing groups led to their inclusion, and the institute was launched under joint sponsorship of the association, the Division, and the state league for nursing and state nurses' association.

Publicity began seven months in advance. Through our monthly bulletin, arrangements were reported as they were completed. Later announcements were carried via newspaper, radio, TV, and health and welfare agency newsletters.

Care was essential to make sure that everyone interested received not only an invitation but informative background material. This included information on both the current Rhode Island picture and on national developments as revealed in the Arden House report. In all, 2,067 invitations went out.

Of the 47 local, state and national agencies who participated, only three were national in scope—the U.S. Public Health Service, the National Tuberculosis Association, and the American Thoracic Society. Among the 44 local groups, we numbered three colleges and universities, 10 nursing associations, five hospitals, nine state government departments and divisions, three local health departments, and several private health and welfare agencies. The list does not include the sponsors.

"Outside" assistance was a highlight of our success. To cite but a few instances: the arrangements chairman was associate chief nurse at the Veterans Administration hospital; active in program planning was the Providence District Nursing Association; "briefing officer" for group discussion leaders was a professor at the Rhode Island College of Education.

The Program

Broad as was the background of those invited, we felt that a summary of the current situation on both state and national levels was needed to start the program. To elicit greatest possible "audience participation," this session was arranged as a panel discussion with interruptions and questions from the floor.

Miss Clarissa E. Boyd, NTA, chaired the panel, which included Dr. Edward T. Blomquist of the U.S. Public Health Service, a representative of the Department of Health and of the state sanatorium, plus the Rhode Island association executive.

Miss Boyd and Dr. Blomquist gave the background of the Arden House conference, showing how closely allied the Arden House report is to Rhode Island's Non-Hospitalized Patient Study, done three years before. The other panel members tied down the studies with state and local information, setting the stage for the afternoon sessions.

After lunch the group broke up into four workshops. It was in detailed planning of this part of the program that we found our greatest task. Here also lay our greatest reward, for from the workshops came the major contributions to thinking and planning for over-all TB control and eventual elimination of the disease in our area.

Problems fell under four main headings: treatment and laboratory services; nursing services; social service and rehabilitation needed by the tuberculosis patient and his family; and detection and reporting of TB. Therefore, a workshop was set up for each category. Specific recommendations from the Rhode Island association's Non-Hospitalized Study were assigned to each workshop for analysis and recommended action.

To each group was assigned a discussion leader and a recorder to keep "minutes" and return to us a written summary of the proceedings. Each group also had a consultant or resource person.

Of the 12 leaders, recorders, and consultants, only one represented the tuberculosis association. The others were physicians, teachers, nurses, social service or welfare agency specialists.

Leaders responsible for making the workshops move held several meetings prior to the institute. Well in advance, each received copies of the Non-Hospitalized Patient Study and a list of the recommendations that his group was to tackle. They also received copies of the Arden House report for comparison, and to provide a national perspective.

Some eight to ten discussants—physicians, public health workers, and social service and welfare spokesmen—were assigned to each group. They met together in advance of the institute, in order to be thoroughly prepared. Then, at the institute meeting, their lively discussions and analyses led to wide audience interest, which took the form of questions, comments and specific suggestions.

We tried to see that one or two workshops were not jammed, causing another to have scant attendance.

The workshop sessions were allotted an hour and fifty minutes. Afterwards, the group reporters presented to the reconvened body their group's major discussion points and recommendations for action. The fervor with which they spoke bore testimony to the interest and general participation in the workshops.

Reactions

The reverberations from the institute are strong. Spontaneous enthusiasm was engendered, and interagency cooperation was enlisted on a hitherto unknown scale. Our job now becomes that of keeping interest and cooperation in motion.

Tape recordings have been reviewed. Workshop minutes have been mimeographed for all participants, and any others who request them.

Our Program Development Committee is analyzing the reports in order to recommend what course we should take in coming months. Many of the groups that participated in the Institute will be involved to help detail the blueprints and translate them into action.

Waves have spread in other directions. Several outside agencies who attended have called staff conferences to review the proceedings. There is new interest in the association's many-sided program, perhaps never adequately understood before. Staff members have been asked to serve on other agency committees whose work extends into broad areas of health and welfare.

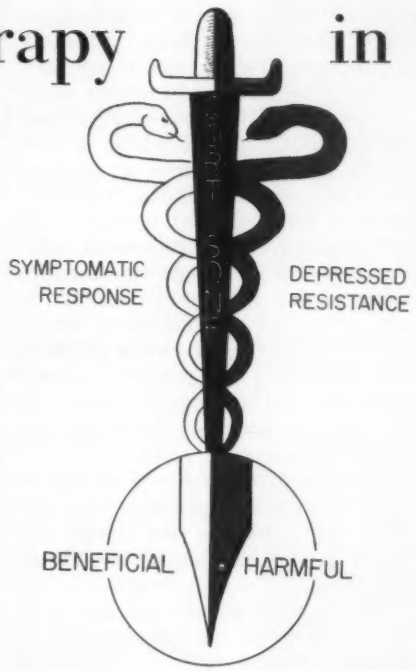
For the Future

Our general outline of action is clear. We must work ever more closely with the Department of Health and others, always toward joint solution of our problems. A series of meetings may come next. The institute planning committee would be included in these as the group best equipped to move ahead on suggestions.

The association must spearhead, perhaps initiate, action, but not err in trying to "go it alone." The institute proved that concerted effort of many knowledgeable people can best effect steady and certain progress.

Jean MacCorison, left, is executive director of the Rhode Island Tuberculosis and Health Association. A graduate of Boston University, Miss MacCorison entered the tuberculosis association field in 1948, serving as an executive of the Barnstable County and Hampshire County associations in Massachusetts before joining the Rhode Island THA in 1956. She is active in NCTW affairs. Marjorie Hart, right, has been public relations consultant for the Rhode Island association since 1956. Mrs. Hart was a reporter on a Cleveland paper, served in the Psychological Warfare Division of SHAEF in London and Luxembourg in World War II, and did PR work in New York City following the war. She is a graduate of the University of Michigan.

Steroid Therapy in Tuberculosis



Sol Katz, M.D.

NOTHING IS COMPLETELY BAD, and there's a little bit of good in the worst of things.

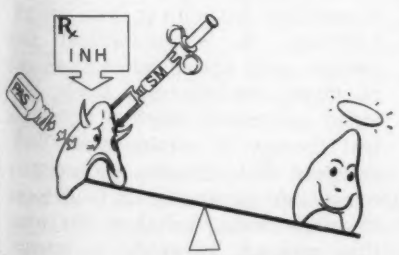
This paraphrased expression could apply to the story of the use of extracts of the cortex of the adrenal gland (adrenocorticosteroids) in the management of tuberculosis. Furthermore, as is true of so many developments in clinical medicine, the outlook on the use of these steroid agents in tuberculosis has undergone change—from being considered an unqualifiedly poor choice, they are, at present, recognized as having a limited but useful role in tuberculosis therapy.

The adrenal glands—pyramid-shaped structures sitting atop the kidneys—have multiple functions. The outer portion, the cortex, is believed to play a part in immunity and resistance. This concept is supported by clinical and experimental evidence which demonstrates that adrenal cortical steroids suppress the normal inflammatory response to infection, inhibit macrophage activity responsible for "mopping up" organisms, and subdue repair by fibrous tissue. The inflammatory processes are useful for localizing infection, destroying the infecting agent, and repairing damaged tissue. Thus, if only the harmful anti-inflammatory effects of the corticosteroids were operative, tubercle bacilli would be stimulated into activity, resulting in their multiplication and invasion of tissue without any prospect of limitation or tissue repair.

Not only have the injurious effects of cortisone on tuberculosis been demonstrated in animal experiments, but the reactivation of tuberculosis in man has occurred when corticosteroids were administered for such nontuberculous conditions as rheumatoid arthritis, severe dermatoses, or allergies. This seemingly incontrovertible evidence justified the initial reaction of doctors in condemning the use of cortisone in active tuberculosis.

However, beneficial effects which have resulted from steroid administration in some infectious states have showed their striking "antitoxic" activity. Patients severely ill with pneumonia or typhoid fever showed defervescence and a reduction in their "toxic" state even though the basic infection continued. This suggested that certain host factors might be favorably influenced by cortisone. Since in tuberculosis some of the clinical manifestations are a consequence of an accelerated interaction between tuberculoprotein and tuberculoprotein-sensitized tissue, it appeared possible that suppression of this overactive tissue response by cortisone might be helpful in managing certain types of tuberculosis, providing the uncontrolled multiplication of tubercle bacilli provoked by cortisone could be controlled by chemotherapeutic agents.

Although fibrosis is an important tissue reparative process, it may produce harmful mechanical effects; for example, it may cause fatal blockage of spinal fluid in tuberculous meningitis. If fibroblastic proliferation could be impeded by cortisone, blockage might be prevented. In tuberculous pericarditis, fibrous tissue may encase the heart and limit its function, and in tuberculous pleuritis, fibrosis may limit pulmonary ventilation, while in tuberculous peritonitis, fibrous adhesions may interfere with intestinal motility. In these serous membrane disorders, corticosteroids, by limiting fibrosis, theoretically at



By the use of powerful antituberculous chemotherapy, the "devilish" effects of the adrenal gland are overbalanced by the "angelic" benefits of adrenocorticosteroids.

Under added adrenocorticosteroid therapy, the patient with far advanced tuberculosis still has his disease (X marks the spot) but he often feels much better, and his family and physician are less harassed by the total management of a difficult problem.

least, could be helpful. Cortisone might also minimize the danger that healing in tuberculous iridocyclitis (tuberculosis of the iris) would result in fibrous tissue deposits leading to secondary glaucoma.

Accurate assessment of adjuvant corticosteroid therapy must depend on carefully controlled clinical trials. Unfortunately, only a few such studies have been done. Most of the evidence on the efficacy of corticosteroids in tuberculosis is the result of clinical impressions noting symptomatic response, radiological improvement, and sputum conversion. Only a few studies have been concerned with the effects of corticosteroids on the pathology of lesions removed by surgery.

As mentioned previously, one of the factors which make tuberculous meningitis such a serious disease is the development of a block to the flow of cerebrospinal fluid, resulting in hydrocephalus. This complication is seen more frequently in children than in adults and may occur in spite of early, vigorous antimicrobial therapy. As a matter of fact, hydrocephalus may occur after the tuberculous infection has been overcome.

By inhibiting the formation of granulation tissue and fibroblastic proliferation, steroids may relieve or prevent the mechanical complications arising from cerebrospinal blockage. After fibrous tissue is well established, adrenal corticosteroids are ineffective. Therefore, although the evidence is only empirical, it would seem reasonable to institute steroid therapy in tuberculous meningitis early, before cerebrospinal block is fully developed.

In those seriously ill with overwhelming tuberculosis, the "antitoxic" effect of adjunctive corticosteroids is often striking. These patients show an accelerated clinical improvement with subsidence of fever, increased appetite, and relief from cough and sweats. They have a remarkable sense of well-being. The sedimentation rate often falls to normal within a few weeks. In some instances, an accelerated rate of radiographic improvement is noted. Steroid therapy does not appear to influence sputum conversion or cavity closure significantly.

There are patients hopelessly ill with advanced tuberculosis in whom corticosteroid therapy, while effecting a temporary symptomatic response, does not alter the ultimate course of the disease. Even in these patients steroid treatment is justified, for not only is the patient relieved of annoying symptoms for a period of time, but the family, doctors, and nurses are aided in the handling of a difficult problem.

Considerable experience has been accumulated on the management of pleural effusion with antimicrobial therapy combined with corticosteroids. Within a few days after initiation of therapy there is control of pain, fever, and other constitutional manifestations. There is a remarkable decrease in the volume of pleural fluid so that in most instances the fluid is almost totally reabsorbed within four weeks. Not only is the rate of clearing striking, but the amount of residual fluid and pleural thickening is so infinitesimal following the use of combined antituberculous drugs and adrenal steroids that this form of treatment must be considered superior.

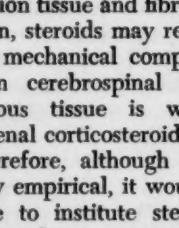
Although experience with this therapy in tuberculous pericarditis and tuberculous peritonitis is not extensive, there are studies indicating its advantages. Corticosteroids operate effectively in serous effusions in tuberculosis, which are probably an allergic expression of the response between tubercle bacilli and the sensitized serous membrane, by blocking the allergic component of the disease. If early results in tuberculosis of the serous membranes are confirmed, corticosteroids will provide a tremendous advance in the therapy of tuberculosis.

Scattered reports attest to the benefits of combined steroid and antituberculous chemotherapy in erythema nodosum, endobronchial tuberculosis, and large mediastinal lymphadenopathy with respiratory distress. However, insufficient work has been done in these forms of tuberculosis to permit an unquestioned appraisal of added adrenocorticosteroids.

One of the interesting features of the cortisone group of agents is their effective suppression of symptoms due to delayed allergic reactions. This property is applicable in controlling the manifestations of hypersensitivity reactions to antimicrobial drugs, thus permitting the continuation of these agents.

There may be a price to pay for the benefits obtained from steroid therapy. The side effects consist of manifestations of hypercortisonism such as "moon" face, fluid retention, acne, and personality changes. Complicating nontuberculous infections may appear. However, when steroid therapy is not prolonged, these adverse effects are minimal and rarely require cessation of treatment.

The full story of corticosteroids and tuberculosis has not yet been written. Certainly, it is established that patients with active tuberculosis can be given corticosteroids safely, provided concurrent effective antimicrobial therapy is administered. Well-designed clinical studies are necessary to evaluate corticosteroids in all forms of tuberculosis, including the types that respond favorably to conventional antituberculous drug therapy. It is probable that, as experience accumulates, the indications for steroid therapy in tuberculosis will be broadened.



Sol Katz, M.D., is chief of Medical Service, Mt. Alto Veterans Administration Hospital and associate professor of medicine, Georgetown University School of Medicine, Washington, D.C. He has done a vast amount of research on cardiopulmonary problems as well as on the evaluation of various therapies in the management of lung diseases. He has to his credit more than 70 contributions to medical literature and is also associate editor of *GP*, official journal of the American Academy of General Practice.

X-RAYS: For TB or Chest Disease?

E. Donald Brown

"WE'RE FINDING A LOT OF LUNG CANCER and other abnormal chest conditions in our TB chest X-ray surveys. When we ask the public to be X-rayed, shouldn't we mention this? Wouldn't more people come if we did?"

A lot of TB workers have been asking that question. But there's another side to the argument too: "People are afraid of cancer—more afraid than of almost any other disease. Maybe the mention of lung cancer would keep them away from screening X-rays."

It was to find out which approach to the public would get more participation that the study reported below was undertaken. Agencies involved included the Milwaukee Health Department, the National Tuberculosis Association, and the Wisconsin Anti-Tuberculosis Association.

General Plan of Study

A number of people were invited by mail to obtain chest X-rays without charge at a health department clinic. Three types of invitations were sent out: one emphasizing TB; one citing lung cancer, heart disease, and TB; and the third mentioning only "chest diseases," with the emphasis on health protection. The comparative response to these three approaches was noted.

Each person (technically the invitation was sent to "households") was invited three times. Both follow-up letters read exactly the same as the original invitation.

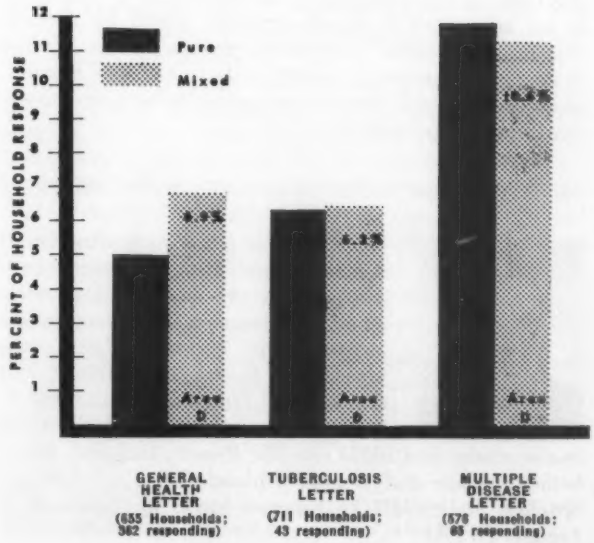
The study was conducted at the South Side Health Center of the Milwaukee Health Department, which is located in a middle-class neighborhood of older homes. The Center includes a number of Health Department facilities and is not particularly identified with TB in the public mind.

Some 2,000 homes immediately surrounding the Health Center were divided into four study areas of approximately equal population as well as geographic and socio-economic characteristics. Areas *A*, *B*, and *C* were "pure" areas, each receiving only one of the three types of invitational letters used. In Area *D* all three types of letters were used in random order, with each household receiving only one type, of course.

The Letters

The three types of letters used were similar in appearance and were sent by first-class mail. Although the envelopes (return address—Milwaukee Health Department) were individually addressed to householders, the enclosure was a form letter without salutation or signature. It consisted of a headline in color (the same for all letters): *Your health is good . . . or is it?* Four short paragraphs followed, differing according to the appeal.

The study was conducted at Milwaukee's South Side Health Center (above), which is located in a middle-class neighborhood of older homes (below).



The concluding tabular matter (the same in all letters) gave clinic hours and other usual details.

The four special paragraphs for the letter emphasizing multiple disease read:

"ARE YOU FREE from cancer of the lungs, heart disease and tuberculosis? Thousands of people in Milwaukee have such chest diseases and don't know it. You or one of your family could be in this group. Do you know—for sure? You can check for lung cancer, enlarged heart, and TB quickly with a free chest X-ray.

"These diseases—if you have one of them—can be found by X-ray long before you notice any symptoms. You can be treated most successfully by finding the disease early. And if you have TB, early treatment will keep you from passing the germs on to your family and friends.

"A YEARLY CHEST X-RAY is one of the smartest moves you can make to protect yourself—and to protect your family and friends.

"Why not get an X-ray for lung cancer, heart disease and TB now—for everybody who lives in your house?"

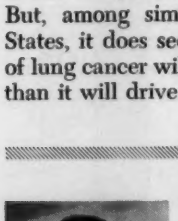
The four special paragraphs for the other two letters emphasizing TB and general health duplicated style and content to the greatest extent possible.

Results

The multiple disease letter was clearly superior in pulling power, as is shown in the graph. Statistically, such a difference might occur by chance in a study about once in 3,100 times. The results in the "pure" areas are strikingly similar to those in the mixed areas.

One might argue that the test areas were different, despite the similarities observed from census data and other information on the areas chosen. But the similar pattern obtained in the mixed area argues strongly that the differences in response result from the definitely superior pulling power of the multiple appeal as used in this study, and not from chance.

How safe is it to generalize to other communities on the basis of this experiment in Milwaukee? It probably is not safe; further experimentation would be needed. But, among similar population groups in the United States, it does seem reasonably safe to say that mention of lung cancer will attract more people to an X-ray survey than it will drive away.



Mr. Brown is assistant director of Social Research at the Wisconsin Anti-Tuberculosis Association. The study on which he reports was a cooperative project done by the WATA, the Milwaukee Health Department, and the National Tuberculosis Association. Staff members particularly involved in the study, in addition to Mr. Brown, included Elizabeth L. Ryan and Harold Holand (WATA), Nina T. Mueller, M.D. (MHD), Edward Sierks and Donald A. Trauger (NTA).

NEW APPROACH:

Professional Educators

ONE OF THE INTERESTING DEVELOPMENTS in medical education today is the trend toward using the skills of the professional educator. Both Stanford and Buffalo have experimented using educators as consultants; however, a great deal of groundwork must be done before this type of consultation will be accepted by most medical schools. A unique symposium sponsored by the Medical Education Committee of the Tuberculosis and Health Association of Los Angeles County, Calif., was a step in this direction, and the reaction was highly favorable.

Under the leadership of Dr. Marvin S. Harris, Clinical Professor of Thoracic Diseases at the College of Medical Evangelists, Los Angeles, this one-day symposium was held to discuss techniques of teaching chest diseases. Departing from traditional conferences devoted entirely to subject matter, four outstanding educators were invited to discuss the learning process, motivation, the use of audio-visual aids, measurement of student performance, and evaluation of the courses of study. These conferences were given by Evan R. Keislar, Ph.D., University of California at Los Angeles; James D. Finn, Ph.D., University of Southern California; Stephen Abrahamson, Ph.D., educational consultant, Stanford University School of Medicine; and Paul Sanazaro, M.D., University of California.

A group of physicians from the four local medical schools discussed the techniques for relating the basic sciences to the clinical aspects of chest medicine, the use of lectures, bedside teaching, combined conferences and research problems. Attending the symposium were 35 physicians who teach chest medicine in the four schools.

Not a sterile rehash

One thing is certain: there wasn't a paucity of ideas. The teaching physicians who participated in the workshop were exposed to a real bombardment of suggestions from all sides, from their colleagues as well as the educators. This meeting was not simply a rehash of what the medical profession already knows about chest diseases; it was an exploration into the field of scientific application of educational theory to the problems of teaching chest diseases. It represented an opportunity for the teaching physician to benefit from the years of research and study which have been devoted to the science and art of teaching.

Space doesn't permit a recapitulation of the symposium

Los Angeles' different symposium on chest diseases draws enthusiastic reaction from medical school teachers

Contribute Skills to Medical Seminar

Richard S. Gaines

content; however, there were many practical suggestions for the improvement of teaching techniques, some of which can be briefly described here:

Practical suggestions to improve teaching

1. Continuous review of the material with reinforcements of learning reduces interference. To teach about chest diseases for two weeks during the junior year and then not review it until the end of the senior year gives the student ample opportunity to forget 80 per cent of what he has learned. A study at the University of Chicago showed that at the end of one year, a class of 30 students could remember only 20 per cent of the biology terminology they had learned. Distributed practice reduces this very high rate of forgetting.

2. Transfer of learning from an artificial training situation to the real-life situation can be accomplished by making sure that the tasks given the student are physically similar to the problems for which the student is being prepared. The use of real-life situations is not always necessary nor desirable since reinforcements for learning can be provided better in the classroom. Inasmuch as the student's learning is more easily reinforced in the artificial training situation, the adage, "experience is the best teacher," is sometimes just a half truth.

3. Medical educators have long recognized the need for improving techniques of evaluationg student performance in medical schools. The inadequacies of evaluation in terms of objectivity, reliability, and validity have been demonstrated in experiments at the Stanford and Buffalo schools of medicine. For example, it has been shown that the teacher's attitude toward the student may influence the student's grade on an essay examination. The student who is considered dull may fail a question because the teacher expects him to do poorly; however, when the bright student misses the question, the teacher may believe that this student merely misunderstood the question.

Nevertheless, there are methods for overcoming the inadequacies in measurement procedures. For instance, the teacher can improve the validity of his observations by supporting them with statements which make a specific reference to something the student did. A check list can be used during the observations to indicate whether or not the student covered the important phases of examining a patient. The check list can be further refined by adding to it a rating scale which tells the teacher not only whether or not the student carried out all the important aspects of the patient's physical examination, but how well the student carried them out.

Other points that were stressed included minimizing the delay between a student's response to a question and his knowledge that he is correct, successively developing a student's learning tasks from simple to complex, making learning materials distinctive, separating potentially confusing subject matter in time and space, and developing criteria for measuring student performance.

Where do we go from here?

Now that the initial experiment has been made, what course does the Los Angeles Association plan to steer? The physicians who teach chest medicine in the local medical schools agree that the proper course has been set and that the same direction should be continued, with more symposiums on techniques of teaching. The L.A. association is currently considering plans for a series of meetings, each one of which will be devoted to consideration of a particular aspect of teaching.

Projected for the near future is a field trip program to the Audio-Visual Department of the University of Southern California, where specific techniques can be demonstrated in the laboratory. Another future session will consider in more depth the application of learning theory to teaching techniques.

An evaluation by the participating physicians showed that they were more interested in the ideas of the professional educators than those of their own colleagues. While they would certainly turn to their own colleagues to discuss medicine, they prefer a fresh viewpoint in the field of medical education. Their primary interest was in the learning process and in the evaluation of student performance. Without dissent, all of the participants recommended that these meetings be continued.

Richard S. Gaines is a field worker and a health education associate in the Los Angeles County Tuberculosis and Health Association's Chronic Respiratory Disease Dept. A graduate of the University of California, Mr. Gaines holds a master's degree in education. Before joining the Los Angeles association, he taught high school English and did vocational counseling.

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Dr. Harry E. Kleinschmidt, former NTA health and education director, died at his home in Mystic, Conn., on July 25. He was 76. Long prominent in the public health field, Dr. Kleinschmidt served the NTA from 1927 to 1942, where he furthered the use of visual aids in health education.

Mrs. Herman A. Schober, Jr., executive director of the Pueblo County TB & Health Association for more than five years, has resigned to accept a position as field representative with the Colorado Society for Crippled Children and Adults, Inc.

Miss Maude M. Phillips, executive secretary of the Cumberland County TB and Health Association, Pennsylvania, for twenty-one years has resigned. **Mrs. William G. Rupp** is the new appointee.

William Mathews has been appointed Seal Campaign director at the Maryland TB Association.

Miss Alice Wagner, associate in the Program Development Division of NTA, has resigned and is going to California as executive director of the Orange County TB and Health Association.

Wilfred G. Solimene, formerly public relations consultant of the Middlesex TB & Health Association in Massachusetts, has been appointed director of public relations for the Massachusetts TB & Health League in Boston.

Kenneth J. Winter, executive secretary of the Erie County Health and TB Association has retired. He is succeeded by **Whitney H. Herr.**

Mrs. Oliver Mundwiler has been appointed executive secretary of the Kendall County TB Association, Illinois.

Mrs. Geneva Berry, former Christmas Seal director of the Contra Costa Tuberculosis Association, California, has been appointed executive secretary of the Marin County TB Association, Calif.

Ann Katherine Haney has resigned her post of executive director of the Orange County TB & Health Association, Calif.

William Roberts, who was public relations director of the California TB & Health Association, has been appointed public information director of the Los Angeles TB Association.

Mary F. Loughlin has been appointed executive secretary for the El Paso County TB Association, Colo.

Michael J. Rucker of Havertown, Pa., is now director of the Christmas Seal Campaign Department of the Philadelphia TB & Health Association.

Mrs. Nancy S. Gardner has been named executive secretary of the Hamilton County TB Association, Tenn., to succeed **Mrs. Frances Watt.**

Ernest Lilley of Lakeland, Fla., died recently after a long illness. He was president of the Florida TB & Health Association, and as registrar at the Florida Southern College in Lakeland stimulated tremendous interest in the tuberculosis program among the students and faculty.

Zoa A. Velde has retired from the Peoria County TB Association, Ill. As executive secretary, she has piloted the course of this organization skillfully and modestly for many years.

Leslie F. Oswald has been appointed executive secretary of the Boulder-Larimer Health & TB Association in Colorado.

Dr. Matthew R. Hadley, former president of the McKeesport TB Assn., Pa., and an Allegheny County Health Dept. clinician, has been elected president of the McKeesport Academy of Medicine.

Margaret A. Stimmel, who has been a representative on the NTA Board for the Colorado Tuberculosis Association, died suddenly on July 22nd. Mrs. Stimmel was assistant professor of bacteriology at Colorado State University and was the 1960 recipient of the Waring Award of the Colorado Conference of Tuberculosis Workers.

Dr. Robert J. Anderson has been appointed deputy chief of the U. S. Public Health Service's Bureau of State Services. His entire professional career has been spent in public health. He not only has had experience in local health work, but has also specialized in tuberculosis control since 1948.

Thomas P. Summers has been appointed president-elect of the Kentucky Public Health Association. He is executive secretary of the Kentucky TB Association.

Robert McCarthy of the Boston TB Association has been appointed public relations consultant for the Middlesex TB Association, Massachusetts.

Mrs. Eone Harger is the new supervisor of the Division on the Aging, in the Bergen County TB & Health Association, Hackensack, New Jersey.

Dr. Florian G. Ruest, 61, passed away recently in St. Joseph's Hospital. He was a member of the board of directors of the Rhode Island TB & Health Association and also of the American Thoracic Society.

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